

Mid Term Test for Computer Networks (CSN 210)

Total points 19/25 ?

Course: Computer Networks (CSN 210)

Semester & Branch: 4th semester B.Tech. (CSE) Sem 20212

Max. Marks: 25

Time Allowed: 25 minutes

NOTE: Attempt all Questions. Each question carries 1 mark.

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✗ 25.

0/1

In TCP, for each retransmission after timeout (except the first retransmission), the TimeoutInterval is derived from the most recent values of EstimatedRTT and DevRTT.

☒ True

☐ False

✗



✓ 11.

1/1

Read the following status codes for the FTP response message.

- i) 331 Username OK, password required
- ii) 125 Error writing file
- iii) 425 Can't open data connection
- iv) 452 Data connection already open; transfer starting

Which of the following options are correct?

- ☒ i) and iii)
- ☐ ii) and iii)
- ☐ i) and iv)
- ☐ ii) and iv)

✓

✓ 9.

1/1

Although HTTP 1.1 uses _____ connections in its default mode, HTTP clients and servers can be configured to use _____ connections instead.

- ☒ persistent, non-persistent
- ☐ non-persistent, persistent
- ☐ Only persistent are allowed
- ☐ Only non-persistent are allowed

✓



✓ 6.

1/1

Consider a packet of length L which begins at end system A and travels over three links to a destination end system. These three links are connected by two packet switches. Let d_i , s_i , and R_i denote the length, propagation speed, and the transmission rate of link i , for $i = 1, 2, 3$. The packet switch delays each packet by d_{proc} . Assuming no queuing delays, in terms of d_i , s_i , R_i ($i = 1, 2, 3$), and L , what is the total end-to-end delay for the packet? Suppose now the packet is 1,500 bytes, the propagation speed on all three links is $2.5 \cdot 10^8$ m/s, the transmission rates of all three links are 2 Mbps, the packet switch processing delay is 3 msec, the length of the first link is 5,000 km, the length of the second link is 4,000 km, and the length of the last link is 1,000 km. For these values, what is the end-to-end delay?

- ☐ 61 msec
- ☒ 64 msec
- ☐ 67 msec
- ☐ 58 msec



✗ 21.

0/1

In the _____ state, the TCP server is waiting for the application to close.

- ☐ CLOSED
- ☐ ESTABLISHED
- ☐ CLOSE_WAIT
- ☒ LAST-ACK



✓ 20.

1/1

In TCP, an ACK number of 1000 always means that _____.

- ☐ 999 bytes have been successfully received
- ☐ 1000 bytes have been successfully received
- ☐ 1001 bytes have been successfully received
- ☒ None of the above

✓

✓ 16.

1/1

What are the five layers in the Internet protocol stack in top down order?

- ☐ Application layer, session layer, network layer, link layer, and physical layer
- ☐ Application layer, presentation layer, network layer, link layer, and physical layer.
- ☒ Application layer, transport layer, network layer, link layer, and physical layer.
- ☐ presentation layer, transport layer, network layer, link layer, and physical layer.

✓



✓ 18.

1/1

Which of the following services use TCP?

- ☐ A) SMTP
- ☐ B) HTTP
- ☐ C) FTP
- ☒ D) All of the above
- ☐ E) None of the above
- ☐ F) A & B
- ☐ G) A & C



✓ 14.

1/1

Match the correct option:

Table 1. Popular Internet applications and their underlying transport protocols.

Application	Application-Layer Protocol	Underlying Transport Protocol
a. File Transfer	1. SNMP	i. TCP
b. Network Management	2. FTP	ii. Typically UDP

- ☐ (a-1-i), (b-2-ii)
- ☒ (a-2-i), (b-1-ii)
- ☐ (a-2-ii), (b-1-1)
- ☐ (a-1-ii), (b-2-i)



✓ 24.

1/1

DNS resource record is a four tuple that contains the following fields:
(Name, Value, Address, TTL)

- ☐ True
- ☒ False



✓ 12.

1/1

The POP3 protocol does not provide any means for a user to create remote folders and assign messages to folders. (True/False)

- ☒ True
- ☐ False



✗ 2.

0/1

Suppose there is exactly one packet switch between a sending host and a receiving host. The transmission rates between the sending host and the switch and between the switch and the receiving host are R_1 and R_2 , respectively. Assuming that the switch uses store-and-forward packet switching, what is the total end-to-end delay to send a packet of length L ? (Ignore queuing, propagation delay, and processing delay.)

- ☐ $L/R_1 + L/R_2$
- ☒ $2L / (R_1 + R_2)$
- ☐ $L / (R_1 + R_2)$
- ☐ $2L/R_1 \cdot R_2$



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✓ 10.

1/1

The status code '400' in the HTTP response message indicates?

- ☐ The requested document does not exist on this server.
- ☐ The requested HTTP protocol version is not supported by the server.
- ☒ This is a generic error code indicating that the request could not be understood by the server. ✓
- ☐ Requested object has been permanently moved

SID: *

19103096

✓ 3.

1/1

Suppose users share a 2 Mbps link. Also suppose each user transmits continuously at 1 Mbps when transmitting, but each user transmits only 20 percent of the time. When circuit switching is used, how many users can be supported?

- ☐ only 1
- ☒ 2 ✓
- ☐ 4
- ☐ Any Number of users are possible

✖ 22.

0/1

In the _____ state, the client TCP has closed its connection to the server.

- ☐ CLOSED
- ☐ FIN_WAIT_1
- ☒ FIN_WAIT_2
- ☐ TIME_WAIT

✖

✓ 23.

1/1

The first 14 bytes in DNS query message is the header section.

- ☐ True
- ☒ False

✓

✓ 15.

1/1

In the TCP segment structure, Setting the _____ bit indicates that the receiver should pass the data to the upper layer immediately.

- ☒ PSH
- ☐ RST
- ☐ SYN
- ☐ FIN

✓



✖ 7.

0/1

Suppose two hosts, A and B, are separated by 20,000 kilometers and are connected by a direct link of transmission rate R. Suppose the propagation speed over the link is 2.5×10^8 meters/sec. For what value of R is the width of a bit as long as the length of the link?

- ☐ 2.5 Kbps
- ☒ 12.5 Kbps
- ☐ 12.5 bps
- ☐ 2.5 bps

✖

✔ 5.

1/1

What is the transmission range of dial-up modems?

- ☐ Upto 24 Mbps
- ☐ Upto 42.8 Mbps
- ☒ Upto 56 Kbps
- ☐ Upto 30.7 Kbps

✔



✓ 17.

1/1

Read the following statements.

- i) HTTP is said to send its control information out-band
- ii) HTTP is said to send its control information in-band
- iii) FTP is said to send its control information out-of-band
- iv) FTP is said to send its control information in-band

Which of the following options are correct?

- ☐ i) and iii)
- ☐ ii) and iv)
- ☐ i) and iv)
- ☒ ii) and iii)



✓ 1.

1/1

Choose the correct options for the following statements

- i. HFC transmission is shared among the users.
- ii. Collisions are possible in the HFC downstream channel.

- ☐ False, False
- ☒ True, False
- ☐ False, True
- ☐ True, True



✗ 4.

0/1

Consider two hosts, A and B, connected by a single link of rate R bps. Suppose that the two hosts are separated by m meters, and suppose the propagation speed along the link is s meters/sec. Host A is to send a packet of size L bits to Host B. What is the transmission time of the packet?

- ☐ m/s seconds
- ☐ L/R seconds
- ☒ $m/s + L/R$ seconds
- ☐ $(m+L) / (s+R)$ seconds

✗

✓ 8.

1/1

A mail server process (using the SMTP protocol) is identified by which of the following port numbers?

- ☒ 25
- ☐ 80
- ☐ 81
- ☐ 20

✓



✓ 19.

1/1

If a TCP segment carries data along with an acknowledgement, this is called _____.

- ☐ Backpacking
- ☒ Piggybacking
- ☐ Piggypacking
- ☐ None of the above



✓ 13.

1/1

TCP socket is identified by:

- i. source IP address.
- ii. source port number.
- iii. destination IP address.
- iv. destination port number.

Choose the correct option.

- ☐ i and ii only.
- ☐ iii and iv only.
- ☒ i, ii, iii and iv.
- ☐ i and iv only.



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